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- (71) Applicant (for all designated States except US): THOR-LABS, INC. [US/US]; 435 Route 206 North, Newton, NJ 07860 (US).
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- (75) Inventors/Applicants (for US only): DIXON, Michael, John [GB/GB]; Ash Tree Farm; "A" Furlong Drove, Little Downham, Ely, Cambridge CB6 2EW (GB). DHESE, Keith, Allen [GB/GB]; 51 Old School Lane, Milton, Cambridge, Cambridgeshire CB4 6BS (GB).
- (74) Agent: HAINES, Miles, John; D Young & Co, 120 Holborn, London EC1N 2DY (GB).

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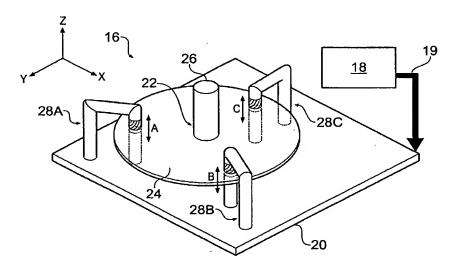
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(54) Title: PIEZOELECTRIC POSITIONER



(57) Abstract: A multi-axis piezoelectric positioner (16, 36, 56, 116) is described. The positioner comprises a fixed part (20, 60, 120) which may be moved relative to a moveable part (22, 62, 122) in a plane. The moveable part comprises a piezoelectric device (24, 64A-D; 66A-D, 124), which is arranged so that it may expand and contract within the plane. The moveable part may be selectively clamped in position relative to the fixed part at first, second and third locations by corresponding first, second and third releasable clamp mechanisms (28A-C, 34A-C, 63A-D, 128A-C). The moveable part may thus be moved in the plane relative by the fixed part by selected activation of ones of the releasable clamp mechanisms while the piezoelectric device is expanded or contracted. This provides for a parallel-mechanism multi-axis piezoelectric positioner. A carrier can be provided which may be positioned along a direction perpendicular to the plane to provide for a three-axis positioner.



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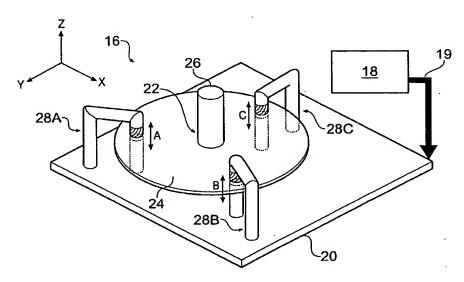
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